3408.65517

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kazuhiko Takaishi )
)
Serial No. 09/802,188 )
)
Filed: March 8, 2001 )
)
For: HEAD POSITIONING CONTROL METHOD AND DEVICE FOR STORAGE DISK APPARATUS )
)
Art Unit: 2651 )
)
Examiner: Davidson, D. )

*I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this date.*

*September 18, 2002*
*Date*

*Registration No. 29,367*
*Attorney for Applicant*

F-CLASS.WCM
Appr. February 20, 1998

**TRANSMITTAL**



Commissioner for Patents
Washington, DC 20231

Sir:

Transmitted herewith is a communication regarding the above-identified Application.

Enclosed please find:

(X) Submission of Partial Translations.

(X) Copy of Japanese Office Action with copies of partial translations cited therein.

(X) The Commissioner is hereby authorized to charge any additional fees which may be required to this application under 37 C.F.R. 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By
Patrick G. Burns
Registration No. 29,367

September 18, 2002

300 South Wacker Drive
Suite 2500
Chicago, IL 60606
Phone: (312) 360-0080
Customer No. 24978

K:\3408\65517\Transmit IDS2.doc

#8
BA 9/26/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kazuhiko Takaishi )
)
Serial No. 09/802,188 )
)
Filed: March 8, 2001 )
)
For: HEAD POSITIONING CONTROL METHOD AND DEVICE FOR STORAGE DISK APPARATUS )
)
Art Unit: 2651 )
)
Examiner: Davidson, D. )

*I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this date.*

*September 18, 2002*
*Date*

*Registration No. 29,367*
*Attorney for Applicant*

F-CLASS.WCM
Appr. February 20, 1998



## SUBMISSION OF PARTIAL TRANSLATIONS

Commissioner for Patents
Washington, DC 20231

Sir:

A copy of a Japanese office action in a foreign counterpart is enclosed, with a partial translation of the primary references cited in Japan. The primary references (JP 7-220419 and JP 9-213033) are already of record in this case, and the enclosed translations are being submitted to insure compliance with the duty of disclosure.

Respectfully submitted,
GREER, BURNS & CRAIN, LTD.

By
Patrick G. Burns
Registration No. 29,367

September 18, 2002
300 South Wacker Drive
Suite 2500
Chicago, Illinois 60606
Telephone: (312) 360-0080
Facsimile: (312) 360-9315
Customer No. 24978
K:\3408\65517\IDS2.doc

整理番号　９８０１４０９　　発送番号　１１３４１３
発送日　平成１３年　４月２４日　　

# 拒絶理由通知書

| | | |
|---|---|---|
| 特許出願の番号 | 平成１０年　特許願　第２７１８３９号 | |
| 起案日 | 平成１３年　４月１２日 | |
| 特許庁審査官 | 西山　昇 | ８１２３　５Ｄ００ |
| 特許出願人代理人 | 林　恒徳 | （外　１名） |
| 適用条文 | 第２９条第２項 | |



この出願は、次の理由によって拒絶をすべきものである。これについて意見があれば、この通知書の発送の日から６０日以内に意見書を提出して下さい。

## 理　由

この出願の下記の請求項に係る発明は、その出願前日本国内又は外国において頒布された下記の刊行物に記載された発明に基いて、その出願前にその発明の属する技術の分野における通常の知識を有する者が容易に発明をすることができたものであるから、特許法第２９条第２項の規定により特許を受けることができない。

記　　（引用文献等については引用文献等一覧参照）

・請求項１－２，４－６，８－９，１１－１３：引用文献等１
［備考］
引用文献１には、上記各請求項の構成が記載されている。

・請求項３，７，１０，１４：引用文献等１，２
［備考］
引用文献２（特に、段落番号００４２の記載参照）には、処理が間に合わない場合に、直後のセクタを無視することが記載されており、引用文献１に記載され

続葉有

# 続　葉

たものにおいて、処理時間に応じて、所定時間より後の位置信号を読み出す用構成することは、当業者であれば適宜考えることができることである。

その場合、請求項７，１４に記載の如く処理することは、当業者であれば、容易に考えることと認められる。

引　用　文　献　等　一　覧

1．特開平９－２１３０３３号公報
2．特開平７－２２０４１９号公報

拒絶の理由が新たに発見された場合には拒絶の理由が通知される。

---

先行技術文献調査結果の記録

・調査した分野　Ｇ１１Ｂ　２１／１０
　　Ｇ１１Ｂ　　５／５９６
・先行技術文献　特開平５－４７１２４号公報
　　特開平６－６０５７４号公報
　　特開平７－２１９７１６号公報
　　国際公開第９７／４５８３２号パンフレット

この先行技術文献調査結果の記録は、拒絶理由を構成するものではない。

---

この拒絶理由通知の内容に関するお問い合わせがございましたら下記までご連絡下さい。

特許審査第四部　情報記録　　西　山　　昇
TEL:03-3581-1101（内3550）　FAX:03-3501-0715

[Translation]

Dispatched on April 24, 2001

Notification of Reason for Rejection

| | |
|---|---|
| Patent Application Number : | Heisei 10 nen 271839 |
| Issued Date : | April 12, 2001 |
| Examiner : | Noboru Nishiyama |
| Representative of Applicant: | Tsunenori Hayashi |
| Applied Law : | Article 29 (2) |

The present application shall be rejected on the following ground. If the applicant has any objections against the rejection, the applicant can file an argument within sixty days from the date of dispatch of the Notification.

**Ground**

Since the invention of the following claims of the application could have been easily invented, prior to the filing of the patent application, by a person with ordinary skill in the art to which the invention pertains, on the basis of an invention described in the following publication distributed in Japan or foreign countries prior to the filing of the patent application, the invention shall not be patentable in view of the provision of Article 29, second paragraph of Japanese Patent Law.

**Note**

Claims: 1-2,4-6,8-9, 11-13

Cited Reference : 1

Comments:

The cited Reference 1 (Japanese Patent Publication No.: Hei 9-213033) discloses all subject matters in above each claims.

Claims 3,7,10,14

Cited references: 1 and 2

The cited Reference 2 (Japanese Patent Publication No.: Hei 7-220419), especially referring the description of the paragraph number 0042, discloses to neglect just last sector when a processing is late.

It should be considered as easy by a person with ordinary skill in the art to read the position signal after a predetermined time in accordance with a processing time by applying the invention of the reference 2 into that of the reference 1.

Further, it is an ordinary technique, which is used generally by the person with ordinary skill in the art to process such as claims 7 and 14 in above case.

Cited References:

1. Japanese Patent Publication No.: Hei 9-213033
2. Japanese Patent Publication No.: Hei 7-220419

A list of prior art

3. Japanese Patent Publication No.: Hei 5-47124
4. Japanese Patent Publication No.: Hei 6-60574
5. Japanese Patem Publication No.: Hei 7-219716
6. PCT Publication No.: 97/45832

【0047】 Therefore, the head switching timing generator 11 is provided with a timer 11a which count repeatedly this time interval T1 to detect a servo sector pulse at each the time interval T1. Further, the head switching timing generator 11 also is provided with a timer 11b which count a deviation time (a time T2 shown in Fig.5) of a servo area of another surface opposite to a servo area of the object surface in addition to the timer 11a which count a time T1. And a timing of the head switching is determined by counting times T1 and T2 of both timers 11a and 11b. Further, the time T2 when the object surface (reference surface) is surface H1 is different from that when the object surface (reference surface) is surface H2. However, when the deviation of the servo area 111 between the surface H1 and surface H2 is set a half of the time interval T1 of the servo area 111, the time T1 is same in both case when the object surface (reference surface) is surface H1 and when the object surface (reference surface) is surface H2.

【0048】 Next, the detail of the head switching by the head switching timing generator 11 using the timers 11a and 11b during period (for example seek operation period) except read/write period is explained as an embodiment of time chart, as shown in Fig. 5, which the object surface (reference surface) is surface H1.

【0049】 First, the head switching timing generator 11 sets T1 to the timer 11a and T2 to the timer 11b and starts simultaneously at the timing of the servo area 111 in the object surface H1. In this time, CPU 12 performs a normal servo control process based on the servo information of the surface H1 (step 409).

(END)

PARTIAL ENGLISH TRANSLATION of JP 7-220419

【0008】 Here, the servo area (servo data) are recorded on each data surface of the disk when manufacturing the HDD and in the shift position in order to improve the efficiency of manufacture. That is, for example, the servo area of one servo sector number on the data surface corresponding to the head 0 is recorded in advance toward the rotation direction to the servo area of same servo sector number on the data surface corresponding to the head 1.

【0009】 Accordingly, when the head switching is occurred according to an access control, an error of detecting time to data sector pulse for same sector number between the present designated head and the next designated head is occurred according to the shift amount. In prior art, it is adopted to preparing a generation process for next data sector pulse by measuring a time until the next servo sector pulse when the head switching is occurred, or to perform recording/reproducing process from the top of the data sector by waiting a generation of an index pulse.

【0040】 Here, it is assumed to switch to the sector number 21 of the head 0 at the position just after the head 2 reads the servo area SA0 of the sector number 0 as shown in Fig.8 (YES in step S13).

【0041】 The head 0 reads the servo data from the servo area

SA1 of the sector number 1 (step S14). By this, the sector pulse decoder 9b outputs an odd servo sector pulse SSP2 corresponding to the odd servo sector to CPU 10a (step S15).

[0042] At this time, by the head switching position, it may be occurred to late the processing preparation of CPU 10 by passing the servo sector of the sector number 1 even though generating the odd servo sector pulse SSP2 corresponding to the sector number 1. In order to perform surely the processing of CPU 10, CPU 10 neglects the odd servo sector pulse SSP2 inputted just after the head switching (YES in step S16 and S17).

(END)